

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A production method for producing a light-emitting device in which a light-emitting layer at least including an n-type semiconductor layer and a p-type semiconductor layer is layered on a transparent crystal substrate, comprising:

applying a silicon organic solvent to at least a part of the transparent crystal substrate or the light-emitting layer to form a transfer layer on at least a part of the transparent crystal substrate or the light-emitting layer;

softening or setting said transfer layer upon supplying an energy thereto;

pressing a mold formed with a minute unevenness structure against the transfer layer to transfer the minute unevenness structure to an outer surface of the transfer layer under a pressure of 5 MPa or higher and 150 MPa or lower; and

dry etching the transfer layer with a chlorine gas using the transfer layer as a resist mask to form a minute unevenness structure for preventing multiple reflection in the transparent crystal substrate or the light-emitting layer.

2. (Previously Presented) A production method according to claim 1, wherein forming the minute unevenness structure in the light-emitting layer includes separating the transparent crystal

substrate from the light-emitting layer after a substrate bearing layer is formed on a surface of the light-emitting layer where electrodes are to be formed.

3. (Canceled)

4. (Previously Presented) A production method according to claim 1, wherein forming the minute unevenness structure for preventing the multiple reflection in the light-emitting layer includes pressing a mold having an upper flat portion to be located near the bottoms of the minute unevenness structure for preventing the multiple reflection and a lower flat portion to be located at a position lowered from the upper flat portion by about the thickness of the upper semiconductor layer of the light-emitting layer against the transfer layer to transfer an upper flat portion and a lower flat portion together with the minute unevenness structure to the transfer layer, and forming electrode-forming portions by etching the upper and lower semiconductor layers of the light-emitting layer when dry etching is carried out using the transfer layer as a resist mask.

5. (Previously Presented) A production method according to claim 4, wherein the etching comprises adjusting a selection ratio of the etching speed of the light-emitting layer to that of the resist from twofold to fourfold.

6. (Previously Presented) A production method according to claim 5, wherein applying the silicon organic solvent to form the transfer layer comprises applying the silicon organic solvent by potting or spray coating.

7. (Canceled)

8. (Previously Presented) A production method according to claim 6, comprising forming an unevenness structure larger than the minute unevenness structure on the minute unevenness structure of the light-emitting layer after forming the minute unevenness structure for preventing the multiple reflection in the light-emitting layer.

9. (Original) A production method according to claim 8, wherein the unevenness structure has the shape of a prism or microlens.

10. (Previously Presented) A production method according to claim 1, wherein the etching comprises adjusting a selection ratio of the etching speed of the light-emitting layer to that of the resist from twofold to fourfold.

11. (Canceled)

12. (Previously Presented) A production method according to claim 1, comprising forming an unevenness structure larger than the minute unevenness structure on the minute unevenness structure of the light-emitting layer after forming the minute unevenness structure for preventing the multiple reflection in the light-emitting layer.

13. (Canceled)

14. (Previously Presented) A production method according to claim 1, wherein applying the silicon organic solvent to form the transfer layer comprises applying the silicon organic solvent by potting or spray coating.

15. (New) A production method according to claim 1, wherein the silicon organic solvent comprises:

an alcohol, an ester, a ketone or a mixture of two or more of an alcohol, an ester, and a ketone, and

a silicon alkoxide component, $R_nSi(OH)_{4-n}$, where R is H or alkyl group, and n is an integer of 0 to 3.

16. (New) A production method according to claim 15, wherein the silicon organic solvent contains TEOS or TMOS.

17. (New) A production method according to claim 1, wherein the silicon organic solvent is applied at a thickness of 2 μm or greater.

18. (New) A production method according to claim 1, wherein the method further comprises post-baking the transfer layer at or below 120°C after the minute unevenness structure is transferred to the transfer layer.